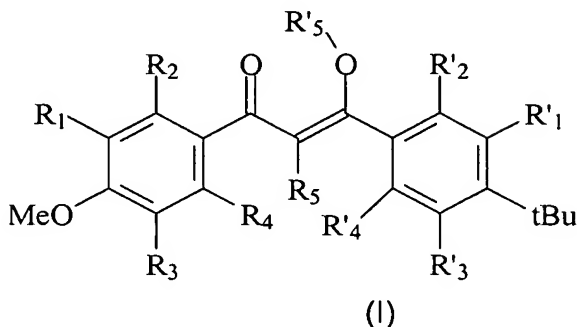


## CLAIMS

### 1. Dibenzoylmethane-based compounds of formula I:



in which,

$R_1$ ,  $R'_1$ ,  $R_2$ ,  $R'_2$ ,  $R_3$ ,  $R'_3$ ,  $R_4$  and  $R'_4$ , which may be identical or different, each represent:

- a hydrogen atom,
- or a linear or branched alkyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkenyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkynyl group containing from 1 to 4 carbon atoms,
- or a C1 to C4 alkoxy group,
- or a halogen atom,
- or a hydroxyl group,
- or an amino group,
- or a nitro group,
- or an amido group,
- or a carbonyl group of formula  $-\text{CO}-\text{Y}$ , in which Y represents a group  $-\text{OH}$ ,  $-\text{OR}$  or  $-\text{SR}$  (R representing a C1 to C4 alkyl) or a halogen atom.

$R_5$  and  $R'_5$ , which are different, each represent:

- a hydrogen atom,
- or a linear or branched alkyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkenyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkynyl group containing from 1 to 4 carbon

atoms,

- or a linear or branched, saturated or unsaturated acyclic carbon-based chain containing from 5 to 20 carbon atoms,
- or a linear or branched, saturated or unsaturated acyclic carbon-based chain, functionalized at its end, containing from 5 to 20 carbon atoms,
- or a linear or branched, saturated or unsaturated acyclic carbon-based chain, comprising a nitrogen atom of amine or amide function and/or an oxygen atom of ether or carboxylic function, containing from 5 to 20 carbon atoms,

and also salts or solvates thereof.

2. Dibenzoylmethane derivatives according to Claim 1, characterized in that  $R_1$ ,  $R'_1$ ,  $R_2$ ,  $R'_2$ ,  $R_3$ ,  $R'_3$ ,  $R_4$ , and  $R'_4$  each represent a hydrogen atom.

3. Dibenzoylmethane derivatives as defined above, characterized in that  $R_5$  and  $R'_5$ , which are different, each represent:

- a hydrogen atom,
- or a linear or branched alkyl group containing from 1 to 4 carbon atoms,
- or a linear or branched, saturated or unsaturated acyclic carbon-based chain containing from 5 to 20 carbon atoms.

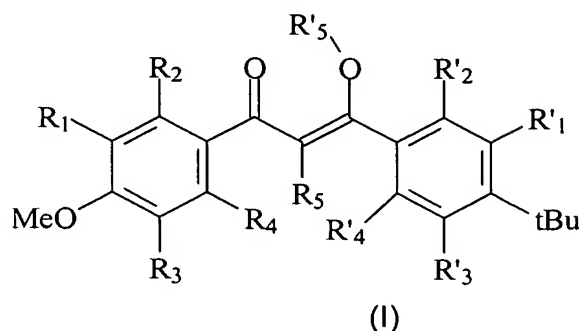
4. Dibenzoylmethane derivatives according to anyone of the claims 1 or 2, characterized in that:

$R_1$ ,  $R'_1$ ,  $R_2$ ,  $R'_2$ ,  $R_3$ ,  $R'_3$ ,  $R_4$  and  $R'_4$  each represent a hydrogen atom,  
and

$R_5$  and  $R'_5$ , which are different, each represent:

- a hydrogen atom,
- or a linear or branched alkyl group containing from 1 to 4 carbon atoms,
- or a linear or branched, saturated or unsaturated acyclic carbon-based chain containing from 5 to 20 carbon atoms.

## 5. Dibenzoylmethane-based compounds of formula I:



in which,

$R_1$ ,  $R'_1$ ,  $R_2$ ,  $R'_2$ ,  $R_3$ ,  $R'_3$ ,  $R_4$  and  $R'_4$ , which may be identical or different, each represent:

- a hydrogen atom,
- or a linear or branched alkyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkenyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkynyl group containing from 1 to 4 carbon atoms,
- or a C1 to C4 alkoxy group,
- or a halogen atom,
- or a hydroxyl group,
- or an amino group,
- or a nitro group,
- or an amido group,
- or a carbonyl group of formula  $-\text{CO}-\text{Y}$ , in which Y represents a group  $-\text{OH}$ ,  $-\text{OR}$  or  $-\text{SR}$  (R representing a C1 to C4 alkyl) or a halogen atom.

$R_5$  and  $R'_5$ , which may be identical or different, each represent:

- a linear or branched alkyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkenyl group containing from 1 to 4 carbon atoms,
- or a linear or branched alkynyl group containing from 1 to 4 carbon atoms,
- or a linear or branched, saturated or unsaturated acyclic carbon-based chain containing from 5 to 20 carbon atoms,

- or a linear or branched, saturated or unsaturated acyclic carbon-based chain, functionalized at its end, containing from 5 to 20 carbon atoms,
  - or a linear or branched, saturated or unsaturated acyclic carbon-based chain, comprising a nitrogen atom of amine or amide function and/or an oxygen atom of ether or carboxylic function, containing from 5 to 20 carbon atoms,
- and also salts or solvates thereof.

6. Cosmetic and/or dermatological composition characterized in that it comprises as active principle at least one compound of formula (I) according to Claims 1 to 5, or a salt or solvate thereof, as defined in any one of the preceding claims.

7. Composition according to the preceding claim also comprises another active principle, the said active principle being a screening agent chosen from the group consisting of PARSOL 1789, 2,4,6-tris[p-(2'-ethylhexyl-1'-oxycarbonyl)anilino]-1,3,5-triazine, 4-(t-butyl)-4'-methoxydibenzoylmethane, 2-hydroxy-4-methoxybenzophenone and 3-(4'-methylbenzylidene)camphor.

8. Composition according to any one of Claims 6 or 7, characterized in that the composition contains 0.5% to 30% and preferably from 1% to 10% by weight of the said active principle, relative to the total weight of the composition.

9. Use of a compound of formula (I) according to any one of the claims 1 to 5, or a salt or solvate thereof, as an agent for protecting the skin or the hair against UV radiation.

10. Use of a compound of formula (I) according to any one of the claims 1 to 5, or a salt or solvate thereof, for the preparation of a cosmetic and/or dermatological composition for protecting the skin or the hair against UV radiation.

11. Use of a compound of formula (I) according to any one of the claims 1 to 5, or a salt or solvate thereof, as a photoactivatable sunscreen.

12. Use of a compound of formula (I) according to Claims 1 to 5, or a salt or solvate thereof, for the preparation of a cosmetic and/or dermatological composition for protecting the skin or the hair against UV radiation, the action of which is photoactivatable and/or prolonged.

13. Cosmetic and/or dermatological product, characterized in that it comprises as active principle a compound of formula (I) according to Claims 1 to 5, or a salt or solvate thereof

14. Process for preparing a compound of formula (I) according to one of Claims 1 to 5, characterized in that it includes:

- a step of forming a complex in aqueous or organic medium, between
  - a) a molecule of general formula (I) in which  $R_1$ ,  $R'_1$ ,  $R_2$ ,  $R'_2$ ,  $R_3$ ,  $R'_3$ ,  $R_4$  and  $R'_4$  each represent a group defined in any one of Claims 1 to 6 and  $R_5$  and  $R'_5$ , which are identical, each represent a hydrogen atom, and
  - b) an alkylammonium halide, and then
- a step of substitution of at least one of the hydrogens represented by  $R_5$  or  $R'_5$ , in organic medium via the action of at least one halide of general formula  $R_5X$  or  $R'_5X$ , in which  $R_5$  and  $R'_5$ , which may be identical or different, each represent a group defined in any one of Claims 1 to 5.

15. Process according to the preceding claim, characterized in that the step of substitution of at least one of the hydrogens represented by  $R_5$  or  $R'_5$  is an alkylation via the action of at least one alkylating agent of general formula  $R_5X$  or  $R'_5X$ , in which  $R_5$  and  $R'_5$ , which may be identical or different, each represent a linear or branched, saturated or unsaturated acyclic carbon-based chain containing from 1 to 20 carbon atoms.